

f) a weight assigned to an edge between a pair of nodes of the next PEG representing a pair of clusters of the partitioned PEG, the edge weight being a summation of weights of edges in the partitioned PEG having endpoints in the pair of clusters in the partitioned PEG; and

g) a partitioning of the nodes of the next PEG into clusters such that a sum of weights of the edges whose endpoints are in different clusters is minimized, and such that, for any cluster, a sum of weights of the nodes in the cluster is no greater than an upper bound corresponding to a size of a next level of the memory hierarchy.

15. (AMENDED) The computer system of claim 14 further comprising:

h) a conversion of the next PEG into the PEG to be partitioned for an additional level of the memory hierarchy, if any; and

i [ f ] ) a repetition of elements b through f for the additional level of the memory hierarchy, if any.

16. (UNCHANGED) The computer system of claim 13 wherein the upper bound is a multiple of a size of a level of the memory hierarchy.

17. (AMENDED) The computer system of claim 15 wherein the upper bound for a level of the memory hierarchy, other than a first level, is a size of a level of the memory hierarchy level divided by an upper bound used to partition a next lower level of the memory hierarchy.

18. (AMENDED) The computer system of claim 15 further comprising:

a removal of a basic block whose size is greater than the upper bound from the partitioning step; and

[ a reintegration ] an inclusion of the removed basic block [ whose size is greater than the upper bound into ] in a next repetition of elements b through f.

#### REMARKS

Prior to a first Office Action in this application, Applicants request that original claims 1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17, and 18 be amended. These amended claims do not involve any

new matter or objectionable changes. When the Examiner takes this application up for action, he is requested to take the foregoing into account.

It is submitted that this application is now in good order for allowance and such allowance is respectively solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,


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By their attorneys,

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